

AMENDMENTS TO THE SPECIFICATION:

Please replace the paragraph beginning at page 6, line 13 with the following amended paragraph:

--The polling for the serial numbers runs, for instance, as follows. At 501, the ~~[[The]]~~ master requests a certain serial number. Three possibilities are given as the answer:

1. The master receives a response which indicates that none of the connected slaves has the corresponding serial number. In this case, none of the slaves responds.
2. The master receives a response which indicates that a slave has this number and has responded to it.
3. The master receives a response which indicates that slaves have responded, but the parity check, that is, the check sum, is wrong.--.

Please replace the paragraph beginning at page 6, line 23 with the following amended paragraph:

--This simply indicates that two or more slaves have responded, and that the question was still too nonspecific. For, the question is formulated in such a way that only the highest or the higher bits of the serial number are asked for, while the lower valued bits may have a zero or a one, that is, they have no influence on the response. For instance, let the serial number have a length of 32 bits, and let the first four bits be ones, then all slaves respond that have a serial number in which the first four bits are ones. The slaves that have a zero in the first four bits do not respond to this. At 502, the ~~[[The]]~~ master proceeds in this manner to identify the individual serial numbers in order then to program an identification number into the individual sensor. For if a conflict occurs, that is, that several sensors respond to one question, the next lower bits will have to be specified. If all connected sensors have responded, then this sensor will have an ID, that is, an address programmed into it. In this manner, the bus system configures itself automatically.--.

Please replace the paragraph beginning at page 7, line 1 with the following amended paragraph:

--Figure 9 shows a possibility of how one may assign an address (LIN-ID) to the sensors during the configuration phase. After a switching on or a reset of the system, it is in initializing phase 90. In this phase 90, each sensor has one LIN-ID, but the same one for each, to make communication possible. Control unit ECU now transmits a serial number, at 93, to all the

sensors. In this context, as described above, control unit ECU is able to ascertain the serial numbers automatically, or they are available to control unit ECU in the internal memory. The sensor having the same serial number now changes into programming state 1, 94, and the others remain in the initializing state. In a subsequent phase 92, [[Now]] control unit ECU transmits, at 95, the future LIN-ID of the sensor. At 96, the [[The]] sensor stores the ID and goes over into normal operating mode at 91. A one-time programming is equally conceivable. In this context, the sensor would transfer directly from the initializing phase into normal operating mode. The configuration may also be accomplished by hardware coding.--.